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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,190	03/28/2001	Kazushi Sato	SONYJP 3.0-763	2916

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EXAMINER

CZEKAJ, DAVID J

ART UNIT PAPER NUMBER

2621

DATE MAILED: 10/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/819,190	SATO ET AL.	
	Examiner	Art Unit	
	Dave Czekaj	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

Claim 4 is objected to because of the following informalities: Claim 4 depends from claim 4. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12, 16-19, 25, and 28-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (6104753), (hereinafter referred to as "Kim") in view of Sugiyama (6188725).

Regarding claims 1, 11, and 28, Kim discloses an apparatus that relates to a HDTV video decoder (Kim: column 1, lines 7-10). This apparatus comprises "decoding an interlaced picture using only four coefficients for both the horizontal and vertical directions" (Kim: figure 3, column 2, lines 60-64) and "decimating the picture in the horizontal direction" (Kim: column 6, lines 64-66). However, this apparatus lacks the field selection and encoding means as claimed. Sugiyama teaches that prior art computing systems create reconstructed interlaced pictures not suitable for display (Sugiyama: column 4, lines 49-52). To help alleviate this problem Sugiyama discloses "selecting a first or second field for generating a progressive picture" (Sugiyama: column 12, lines 50-65) and "encoding a picture for output" (Sugiyama: figure 1).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to take the apparatus disclosed by Kim and add the processing taught by Sugiyama in order to obtain an apparatus that can produce outputs suitable for display.

Regarding claims 2, 25, and 29, Sugiyama discloses "the input compressed picture information is by the MPEG 2 4 standard" (Sugiyama: column 1, lines 35-36).

Regarding claims 3, 12, and 30, Kim discloses "the decimating means performs $\frac{1}{2}$ downsampling in horizontal direction and output has resolution of $\frac{1}{4}$ for both the horizontal and vertical directions" (Kim: column 6, lines 64-66).

Regarding claims 4-5 and 31-32, although not disclosed, it would have been obvious to only decode and process I and P pictures (Official Notice). Doing so would have been obvious in order to reduce the amount of information the system has to process.

Regarding claim 6, Kim discloses "a variable length decoder and IDCT" (Kim: figure 2).

Regarding claim 7, Kim discloses "the IDCT means is associated with the field mode and applies IDCT to DCT coefficients of four horizontal and vertical coefficients of eight horizontal and vertical DCT coefficients" (Kim: figure 9, item 31).

Regarding claims 8-10, although not disclosed, it would have been obvious to apply field separation to the DCT coefficients (Official Notice). Doing so would have been obvious in order to process the correct video data.

Regarding claim 16, Kim discloses "the filter is a half-band filter" (Kim: figure 9).

Regarding claim 17, Kim discloses "the filter calculates coefficients equivalent to a series of interpolation operations to apply the coefficients direction to pixel values depending on values of the motion vector" (Kim: figure 9, figure 30, column 17, lines 15-35).

Regarding claims 18-19, Kim discloses "the motion compensation means virtually creates pixels as necessary outside the picture frame by way of a filtering processing operation" (Kim: column 10, lines 15-25, wherein the half pixel or pel is the result of the virtual pixels).

Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (6104753), (hereinafter referred to as "Kim") in view of Sugiyama (6188725) in further view of Staver et al. (5463569), (hereinafter referred to as "Staver").

Regarding claims 13-15, note the examiners rejection for claim 1, and in addition, claims 13-15 differ from claim 1 in that claims 13-15 further require a double interpolation filter. Staver teaches that a sharper cutoff in frequency may be achieved by using a double interpolation filter (Staver: column 6, lines 21-24). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to implement the double interpolation filter taught by Staver in order to obtain an apparatus that can easily achieve a sharp cutoff in frequency.

Claims 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (6104753), (hereinafter referred to as "Kim") in view of Sugiyama (6188725) in further view of Katayama et al. (5621826), (hereinafter referred to as "Katayama").

Regarding claims 20-24, note the examiners rejection for claim 1, and in addition, claims 20-24 differ from claim 1 in that claims 20-24 further require converting to a picture containing $\frac{1}{4}$ resolution in both directions. Katayama teaches that data reduction using conventional methods results in the loss of information (Katayama: column 2, lines 28-30). To help alleviate this problem, Katayama discloses "converting an interlaced picture having $\frac{1}{2}$ resolution in both directions to a picture having a resolution of $\frac{1}{2}$ horizontal $\frac{1}{4}$ vertical and then to $\frac{1}{4}$ for both directions" (Katayama: figures 2 and 11, wherein the converting is the two stage process. After the first iteration, the picture has a resolution of $\frac{1}{2}$ horizontal $\frac{1}{4}$ vertical. After the second iteration/pass the picture has $\frac{1}{4}$ resolution in both directions. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to implement the data reduction method taught by Katayama in order to prevent the loss of data.

Claims 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (6104753), (hereinafter referred to as "Kim") in view of Sugiyama (6188725) in further view of Kondo (5835138).

Regarding claims 26-27, note the examiners rejection for claim 1, and in addition, claims 26-27 differ from claim 1 in that claims 26-27 further require a synthesized motion vector. Kondo teaches that the motion vector due to the camera shake cannot be correctly detected (Kondo: column 2, lines 15-20). To help alleviate this problem Kondo discloses "synthesizing the motion vector" (Kondo: column 10, lines 16-23). Therefore, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to implement the synthesized motion vector taught by Kondo in order to obtain an apparatus that can correctly identify motion vectors and correct camera shaking from blurring the image.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US-6748018	06-2004	Sato et al.
US-6539120	03-2003	Sita et al.
US-6104753	08-2000	Kim et al.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave Czekaj whose telephone number is (571) 272-7327. The examiner can normally be reached on Mon-Thurs and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2621

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DJC


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TC 2600